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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,118	12/17/2001	Masahiro Yanagi	1614.1205	4188

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EXAMINER	
LAO, LUN YI	
ART UNIT	PAPER NUMBER
2629	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/016,118	YANAGI, MASAHIRO	
	Examiner	Art Unit	
	LUN-YI LAO	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 6-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 6-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 and 6-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al(5,809,433) in view of Rudisill et al(6,272,324).

As to claims 1-3 and 6-23, Thompson et al teach an input device input device comprising an antenna(107, 750, 860 or 970) arranged at an upper surface inside the housing(102 or 101) and emitting a radio wave based on input information generated by the input part (keypad)(see figures 1-2, 6-10; abstract; column 2, lines 6-65; column 3, lines 39-41; column 5, lines 50-55 and column 6, lines 21-43). Thompson et al teach the housing(102 or 101) comprising a case; and first upper cover(103)(e.g, first cover, figure 7) is swappable with a second upper cover(e.g. second cover, figure 8)(see figures 1-2; figures 7-10 and column 2, lines 6-33). Thompson et al teach the antenna is arranged inside each of upper covers at an uppermost portion of the housing(102 or 101)(see figures 1-2, 7-10 and column 2, lines 5-35); a communicating part(515)

provided to the case and supplying a transmission signal(placing a call or sending e-mail) to the antenna(107 or 750 or 860 or 970)(see figures 1-3, 7-10; abstract; column 1, lines 46-48; column 2, lines 57-65; column 3, lines 10-20 and lines 39-60); and the antenna(107 or 750 or 860 or 970) is detachably (unfastener) connected to the communicating part (515) by a connector(see figures 1-5, 7-10; column 3, lines 10-68 and column 4, lines 1-57).

Thompson et al fail to disclose a detachable upper cover and a detachable antenna.

Rudisill et al teach a detachable upper cover(14) with an antenna(24, 26) and the antenna(24, 26) is detachable from the case(12) along with each of the detached upper covers(14)(see figures 1-5; abstract; column 1, lines 47-58; column 4, lines 5-34; column 5, lines 31-68 and column 6, lines 1-49). It would have been obvious to have modified Thompson et al with the teaching of Rudisill et al, since Thompson et al have disclose the cover(103) connected to the housing(101 or 102) by a hinge(see figure 1, 4; column 3, lines 61-68 and column 4, line 1) and a damage cover could be easy to repair or replace(see Rudisill et al's column 1, lines 47-54).

As to claim 2, Thompson et al(5,809,433) teach the antenna(107, 750 or 860 or 970) is made from a conductive wire rod(e.g. copper)(see figures 7-10 and column 4, lines 6-25).

As to claim 3, Thompson et al teach the antenna(107, 750 or 860 or 970) is formed by printing a conductor(e.g. 648 or 649) on the upper surface inside the housing(101 or 102) (see figures 1-2 and 7-10).

As to claim 6, Thompson et al teach the input part(e.g. 109) is detachably connected to communicating part(515) by connector(see figure 1-3 and column 3, lines 10-20).

As to claims 7-10, Thompson et al does not illustrate the detail of a specific common standard wireless transmitting techniques "USED" such as Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK), Phase Shift Keying (PSK) and Spread Spectrum Communication (SSC) however since he does perform a wireless transmission it is clear he must use some modulation technique and the specific transmitting technique used is clearly not critical to the practice of either Thompson et al or Applicant. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to use any common standard wireless modulation techniques, because Thompson et al gave no indication that the particular common standard wireless modulation technique use would be critical to practice of his invention and again one is always motivated to use standard excepted practices where ever details are missing when implementing the Thompson's invention.

As to claim 12, Thompson et al teach a radio transmitting circuit board(319) that is contained within the inside volume, wherein the antenna(107, 750 or 860 or 970) is a conductive wire rod that is connected to the radio transmitting circuit board(319) at only one end of the conductive wire rod (see figure 1-3, 7-10 and column 3, lines 39-65).

As to claim 13, Thompson et al teach the antenna(107, 750 or 860 or 970) is formed by a printed wiring method on an underside of the upper cover(13)(see figures 1-3; 7-10 and column 3, lines 20-37).

As to claims 20-21, the claim is substantially similar to the claims 1, 11 and 14-15, and would be analyzed as previously discussed with respect to these claim, be considering that the second detachable cover is one of cover showed in figures 7-10.

As to claims 14, 17 and 22, It would have been obvious to have a screw that connect the top and the bottom parts since Thompson et al teach the top connected to the bottom by hinge(see figures 1-4; column 3, lines 61-68 and column 4, line 1).

As to claims 15-16 and 18-19, Thompson et al teach the antenna(107, 750 or 860 or 970) is arranged so as to surround a center portion or a depress keytop of the upper cover(3) (see figures 1-2, 7-10).

3. Claims 1-3 and 6-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ying et al(6,442,400) in view of Rudisill et al(6,272,324).

Ying et al teach an input device input device comprising an antenna(40, 42, 52)(see figures 2, 3 and 5) arranged at an upper surface inside the housing(12) and emitting a radio wave based on input information generated by the input part(keypad, 22)(see figures 2, 3, 5; abstract and column 1, lines 33-39). Ying et al teach the housing(12) comprising a case; and first upper cover(14)(e.g, first cover, figure 2) is swappable with a second upper cover(e.g. second cover, figure 3 or figure 5)(see column 3, lines 45-54 and column 4, lines 25-64). Ying et al teach the antenna(40, 42, 52) is arranged inside each of upper covers(14) at an uppermost portion of the housing(12)(see figures 2, 3 and 5); a communicating part provided to the case and supplying a transmission signal(placing a call or sending e-mail) to the antenna(40, 42, 52)(see figures 2, 3, 5; abstract and column 1, lines 18-39); and the antenna(42, 52) is

detachably connected to the communicating part by a connector(48 or 58)(see figures 4, 5 and column 4, lines 25-63).

Ying et al fail to disclose a detachable upper cover.

Rudisill et al teach a detachable upper cover(14) with an antenna(24, 26) and the antenna(24, 26) is detachable from the case(12) along with each of the detached upper covers(14) (see figures 1-5; abstract; column 1, lines 47-58; column 4, lines 5-34; column 5, lines 31-68 and column 6, lines 1-49). It would have been obvious to have modified Ying et al with the teaching of Rudisill et al, since Ying et al have disclose the cover(14) connected to the housing(12) by a hinge(26)(see figure 2 and column 3, line 27-43) and a damage cover could be easy to repair or replace(see Rudisill et al's column 1, lines 47-54).

As to claim 2, Ying et al teach the antenna(40, 42, 52) is made from a conductive wire rod(see figures 2, 3, 5 and column 4, lines 27-30).

As to claim 3, Ying et al teach the antenna(40, 42, 52) is formed by printing a conductor on the upper surface inside the housing(12) (see figures 2, 3, 5 and column 4, lines 27-30).

As to claims 7-10, Ying et al do not illustrate the detail of a specific common standard wireless transmitting techniques "USED" such as Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK), Phase Shift Keying (PSK) and Spread Spectrum Communication (SSC) however since he does perform a wireless transmission it is clear he must use some modulation technique and the specific transmitting technique used is clearly not critical to the practice of either Ying et al or Applicant. Therefore it

would have been obvious to one of ordinary skill in the art at the time of invention was made to use any common standard wireless modulation techniques, because Ying et al gave no indication that the particular common standard wireless modulation technique use would be critical to practice of his invention and again one is always motivated to use standard excepted practices where ever details are missing when implementing the Ying's invention.

As to claim 12, Ying et al teach a radio transmitting circuit board(inherent) that is contained within the inside volume, wherein the antenna(40, 42, 52) is a conductive wire rod that is connected to the radio transmitting circuit board at only one end of the conductive wire rod(45, 48 or 58) (see figures 3-5; column 1, lines 17-39 and column 4, lines 25-65).

As to claim 13, Ying et al teach the antenna(40, 42, 52) is formed by a printed wiring method on an underside of the upper cover(13)(see figures 2, 3, 5 and column 4, lines 25-30).

As to claims 20-21, the claim is substantially similar to the claims 1, 11 and 14-15, and would be analyzed as previously discussed with respect to these claim, be considering that the second detachable cover is one of cover showed in figures 7-10.

As to claims 14, 17 and 22, It would have been obvious to have a screw that connect the top and the bottom parts since Ying et al teach the top connected to the bottom by hinge(see figure 2 and column 3, line 27-33).

As to claims 15-16 and 18-19, Ying et al teach the antenna(40, 42 or 52) is arranged so as to surround a center portion or a depress keytop(22) of the upper cover(14) (see figures 2-5).

Response to Arguments

4. Applicant's arguments filed on December 6, 2006 have been fully considered but they are not persuasive.

Applicants argue that the combination of Thompson and Rudisill fail to provide a cover that is swappable with a second detachable cover on pages 6-7. The examiner disagrees with that since Thompson teaches a second cover(e.g. see figure 8 or figure 9 or figure 10) with different shape of antenna from a first cover(see figure 7), but have a same connector(see figures 8-10) with the first cover (see figure 7) to couple to the main body(1)(see figures 6-10) and Rudisill teaches a cover(e.g., a broken cover) can be swappable(replaced) with a second detachable cover(new cover)(see figures 2-5 and column 1, lines 50-54). Thus, the combination of the Thompson and Rudisill teach a cover that is swappable with a second detachable cover as cited in the claim.

Applicants argue that the second cover of Thompson is connected to the circuitry(515) mounted to the main body(101) and it is impossible to take the cover of Thompson off and exchange with another cover on page 7. The examiner disagrees with that since Rudisill teach a first cover can be exchange with a second cover(new cover) by pin connector(100, 116, 110, 34)(see figures 2-5; column 1, lines 50-54 and

column 5, lines 8-30). Thus, the combination of the Thompson and Rudisill teach a cover that is swappable with a second detachable cover as cited in the claim.

Applicants argue that the combination of Ying et al and Rudisill fail to provide a cover that is swappable with a second detachable cover on pages 7-8. The examiner disagrees with that since Ying et al teaches a second cover(e.g. see figure 5) with different shape of antenna from a first cover(see figures 2-4), but have a same connector(48 or 58)(see figures 4-5) with the first cover (see figures 2-4) to couple to the main body(12)(see figures 1-5) and Rudisill teaches a cover(e.g., a broken cover) can be swappable(replaced) with a second detachable cover(new cover)(see figures 2-5 and column 1, lines 50-54). Thus, the combination of the Ying and Rudisill teach a cover that is swappable with a second detachable cover as cited in the claim.

Applicants argue that Ying teaches antenna is electrically connected to the main body(12) though the opening(45) and it is impossible to take the cover of Ying off and exchange with another cover on page 8. The examiner disagrees with that since Ying et al teach a first cover(see figures 2-4) and a second cover(see figure 5) both have same connector(48 or 58) connected to the main body(12)(see figures 1-5 and column 4, lines 25-63) Rudisill teach a first cover can be exchange with a second cover(new cover) by pin connector(100, 116, 110, 34)(see figures 2-5; column 1, lines 50-54 and column 5, lines 8-30).). Thus, the combination of the Ying and Rudisill teach a cover that is swappable with a second detachable cover as cited in the claim.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 27, 2007

Lun-yi Lao
Primary Examiner